

11	20	29	38	47	56
5'GC CCC GCG GCC AGC TCG CTC CAC TCC CAC TTC CTG AGC TCC GCC ATG GGA GCC CTG					
65	74	83	92	101	110
GAG GCC CGG CCT GGC CGC TCC CGG CCC TGG GGT GCA CAT CGG CCC TGA GTC CCG					
119	128	137	146	155	164
TCC CAG GCT CTG GGC TCG GGC AGC CGC CAC CGC TGC CCA GGA CGT CGG GCC					
173	182	191	200	209	218
TCC TGC CTT CCT CCC AGG CCC CCA CGT TGC TGG CCG CCT GGC GTG GCC GCC					
227	236	245	254	263	272
ATG CTC CTG CCT TGG GCC ACC TCT GCC CCC GGC CTG GCC TGG GGG CTG GTG					
M L L P W A T S A P G L A W G P L V					
281	290	299	308	317	326
CTG GGC CTC TTC GGG CTC CTG GCA GCA TCG CAG CCC CAG GCG GTG CCT CCA TAT					
L G L F G L L A A S Q P Q A V P P Y					
335	344	353	362	371	380
GCG TCG GAG AAC CAG ACC TGC AGG GAC CAG GAA AAG GAA TAC TAT GAG CCC CAG					
A S E N Q T C R D Q E K E Y Y E P Q					

FIGURE 1A

389	398	407	416	425	434
CAC CGC ATC TGC TGC CGC TGC CCG CCA GGC ACC TAT GTC TCA GCT AAA TGT					
H R I C C S R C P P G T Y V S A K C					
443	452	461	470	479	488
AGC CGC ATC CGG GAC ACA GTT TGT TGC ACA TGT GCC GAG AAT TCC TAC AAC GAG					
S R I R D T V C A T C A E N S Y N E					
497	506	515	524	533	542
CAC TGG AAC TAC CTG ACC ATC TGC TGC CTG TGC CGC CCC TGT GAC CCA GTG ATG					
H W N Y L T I C Q L C R P C D P V M					
551	560	569	578	587	596
GGC CTC GAG GAG ATT GCC CCC TGC ACA AGC AAA CGG AAG ACC CAG TGC CGC TGC					
G L E E I A P C T S K R K T Q C R C					
605	614	623	632	641	650
CAG CCG GGA ATG TTC TGT GCT GCC TGG GCC CTC GAG TGT ACA CAC TGC GAG CTA					
Q P G M F C A A W A L E C T H C E L					
659	668	677	686	695	704
CTT TCT GAC TGC CCG CCT GGC ACT GAA GCC GAG CTC AAA GAT GAA GTT GGG AAG					
L S D C C P P G T E A E L K D E V G K					
713	722	731	740	749	758
GGT AAC AAC CAC TGC GTC CCC TGC AAG GCA GGC CAC TTC CAG AAT ACC TCC TCC					
G N N H C V P C K A G H F Q N T S S					

FIGURE 1B

767	776	785	794	803	812
CCC AGC GCC CGC TGC CAG CCC CAC ACC AGG TGT GAG AAC CAA GGT CTG GTG GAG					
P S A R C Q P H T R C E N Q G L V E					
821	830	839	848	857	866
GCA GCT CCA GGC ACT GCC CAG TCC GAC ACA ACC TGC AAA AAT CCA TTA GAG CCA					
A A P G T A Q S D T T C K N P L E P					
875	884	893	902	911	920
CTG CCC CCA GAG ATG TCA GGA TCG CTG CTC AAG AGG CGT CCG CAG GGA GAG GGA					
L P P E M S G S L L K R R P Q G E G					
929	938	947	956	965	974
CCC AAT CCT GTA GCT GGA AGC TGG GAG CCT CCG AAG GCC CAT CCA TAC TTC CCT					
P N P V A G S W E P P K A H P Y F P					
983	992	1001	1010	1019	1028
GAC TTG GTA CAG CCA CTG CTA CCC ATT TCT GGA GAT GTT TCC CCA GTA TCC ACT					
D L V Q P L L L P I S G D V S P V S T					
1037	1046	1055	1064	1073	1082
GGG CTC CCC GCA GCC CCA GTT TTG GAG GCA GGG GTG CCG CAA CAG CAG AGT CCT					
G L P A A P V L E A A G V P Q Q Q S P					
1091	1100	1109	1118	1127	1136
CTG GAC CTG ACC AGG GAG CCG CAG TTG GAA CCC GGG GAG CAG AGC CAG GTG GCC					
L D L T R E P Q L L E P G E Q S Q V A					

FIGURE 1C

1145	1154	1163	1172	1181	1190
CAC GGT ACC AAT GGC ATT CAT GTC ACC GGC GGG TCT ATG ACT ATC ACT GGC AAC					
H G T N G I H V T G G S M T I T G N					
1199	1208	1217	1226	1235	1244
ATC TAC ATC TAC AAT GGA CCA GTA CTG GGG GGA CCA CCG GGT CCT GGA GAC CTC					
I Y I Y N G P V L G G P P G P G D L					
1253	1262	1271	1280	1289	1298
CCA GGT ACC CCC GAA CCT CCA TAC CCC ATT CCC GAA GAG GGG GAC CCT GGC CCT					
P A T P E P P Y P I P E E G D P G P					
1307	1316	1325	1334	1343	1352
CCC GGG CTC TCT ACA CCC CAC CAG GAA GAT GGC AAG GCT TGG CAC CTA GCG GAG					
P G L S T P H Q E D G K A W H L A E					
1361	1370	1379	1388	1397	1406
ACA GAG CAC TGT GGT GCC ACA CCC TCT AAC AGG GGC CCA AGG AAC CAA TTT ATC					
T E H C G A T P S N R G P R N Q F I					
1415	1424	1433	1442	1451	1460
ACC CAT GAC TGA CGG AGT CTG AGA AAA GGC AGA AGA AGG GGG GCA CAA GGG CAC					
T H D					

FIGURE 1D

TOPAZ 2460

1469	1478	1487	1496	1505	1514
CTT CTC CCT TGA GGC TGC CCT GCC CAC GTG GGA TTC ACA GGG GCC TGA GTA GGG					
1523	1532	1541	1550	1559	1568
CCC GGG GAA GCA GAG CCC TAA GGG ATT AAG GCT CAG ACA CCT CTG AGA GCA GGT					
1577	1586	1595	1604	1613	1622
GGG CAC TGG CTG GGT ACG GTG CCC TCC ACA GGA CTC TCC CTA CTG CCT GAG CAA					
1631	1640	1649	1658	1667	1676
ACC TGA GGC CTC CCG GCA GAC CCA CCC ACC CCC TGG GGC TGC TCA GCC TCA GGC					
1685	1694	1703	1712	1721	1730
ACG GAC AGG GCA CAT GAT ACC AAC TGC TGC CCA CTA CAG CAC GCC GCA CCG GAG					
1739	1748	1757	1766	1775	1784
CAC GGC ACC GAG GGA GCC GCC ACA CGG TCA CCT GCA AGG ACG TCA CGG GCC CCT					

FIGURE 1E

1793	1802	1811	1820	1829	1838
CTA AAG GAT TCG TGG TGC TCA TCC CCA AGC TTC AGA GAC CCT TTG GGG TTC CAC					
1847	1856	1865	1874	1883	1892
ACT TCA CGT GGA CTG AGG TAG ACC CTG CAT GAA GAT GAA ATT ATA GGG AGG ACG					
1901	1910	1919	1928	1937	1946
CTC CTT CCC TCC CCT CCT AGA GGA GAG GAA AGG GAG TCA TTA ACA ACT AGG GGG					
1955	1964	1973	1982		
TTG GGT AGG ATT CCT AGG TAT GGG GAA GAG TTT TGG 3'					

FIGURE 1F

1	M	L	P	W	A	T	S	A	P	G	L	A	W	G	P	L	V	L	G	L	F	G	L	L	A	A	S	Q	P	SEQ ID NO1	
1	M	L	P	W	A	T	S	A	P	G	L	A	W	G	P	L	V	L	G	L	F	G	L	L	A	A	S	Q	P	g339762	
1	M	R	L	P	R	A	S	S	P	C	G	L	A	W	G	P	L	L	L	G	L	S	G	L	L	V	A	S	Q	P	g600223
31	Q	A	V	P	P	Y	A	S	E	N	Q	T	C	R	D	Q	E	K	E	Y	Y	E	P	Q	H	R	I	C	C	S	SEQ ID NO1
31	Q	A	V	P	P	Y	A	S	E	N	Q	T	C	R	D	Q	E	K	E	Y	Y	E	P	Q	H	R	I	C	C	S	g339762
31	Q	L	V	P	P	Y	R	I	E	N	Q	T	C	W	D	Q	D	K	E	Y	Y	E	P	M	H	D	V	C	C	S	g600223
61	R	C	P	P	G	T	Y	V	S	A	K	C	S	R	I	R	D	T	V	C	A	T	C	A	E	N	S	Y	N	E	SEQ ID NO1
61	R	C	P	P	G	T	Y	V	S	A	K	C	S	R	I	R	D	T	V	C	A	T	C	A	E	N	S	Y	N	E	g339762
61	R	C	P	P	G	E	F	V	F	A	V	C	S	R	S	Q	D	T	V	C	K	T	C	P	H	N	S	Y	N	E	g600223
91	H	W	N	Y	L	T	I	C	Q	L	C	R	P	C	D	P	V	M	G	L	E	E	I	A	P	C	T	S	K	R	SEQ ID NO1
91	H	W	N	Y	L	T	I	C	Q	L	C	R	P	C	D	P	V	M	G	L	E	E	I	A	P	C	T	S	K	R	g339762
91	H	W	N	H	L	S	T	C	Q	L	C	R	P	C	D	I	V	L	G	F	E	E	V	A	P	C	T	S	D	R	g600223
121	K	T	Q	C	R	C	Q	P	G	M	F	C	A	A	W	A	L	E	C	T	H	C	E	L	-	-	L	S	D	C	SEQ ID NO1
121	K	T	Q	C	R	C	Q	P	G	M	F	C	A	A	W	A	L	E	C	T	H	C	E	L	-	-	L	S	D	C	g339762
121	K	A	E	C	R	C	Q	P	G	M	S	C	V	Y	L	D	N	E	C	V	H	C	E	E	E	R	L	V	L	C	g600223
149	P	P	G	T	E	A	E	L	K	D	E	V	G	K	G	N	N	H	C	V	P	C	K	A	G	H	F	Q	N	T	SEQ ID NO1
149	P	P	G	T	E	A	E	L	K	D	E	V	G	K	G	N	N	H	C	V	P	C	K	A	G	H	F	Q	N	T	g339762
151	O	P	G	T	E	A	E	V	T	D	E	I	M	D	T	D	V	N	C	V	P	C	K	P	G	H	F	Q	N	T	g600223

FIGURE 2A

179	S	S	P	S	A	R	C	Q	P	H	T	R	C	E	N	Q	G	L	V	E	A	A	P	G	T	A	Q	S	D	T	SEQ ID NO1
179	S	S	P	S	A	R	C	Q	P	H	T	R	C	E	N	Q	G	L	V	E	A	A	P	G	T	A	Q	S	D	T	g339762
181	S	S	P	R	A	R	C	Q	P	H	T	R	C	E	I	Q	G	L	V	E	A	A	P	G	T	S	Y	S	D	T	g600223
209	T	C	K	N	P	L	E	P	L	P	P	E	M	S	G	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	SEQ ID NO1
209	T	C	K	N	P	L	E	P	L	P	P	E	M	S	G	T	M	L	M	L	A	V	L	L	P	L	A	F	F	L	g339762
211	I	C	K	N	P	P	E	P	-	-	-	-	-	-	G	A	M	L	L	A	I	L	L	S	L	V	L	F	L	g600223	
224	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	SEQ ID NO1
239	L	L	A	T	V	F	S	C	I	W	K	S	H	P	S	L	C	R	K	L	G	S	L	L	K	R	R	P	Q	G	g339762
235	L	F	T	T	V	L	A	C	A	W	M	R	H	P	S	L	C	R	K	L	G	T	L	L	K	R	H	P	E	G	g600223
233	E	G	P	N	P	V	A	G	S	W	E	P	P	K	A	H	P	Y	F	P	D	L	V	Q	P	L	L	P	I	S	SEQ ID NO1
269	E	G	P	N	P	V	A	G	S	W	E	P	P	K	A	H	P	Y	F	P	D	L	V	Q	P	L	L	P	I	S	g339762
265	E	E	S	P	P	C	P	A	-	-	-	P	R	A	D	P	H	F	P	D	L	A	E	P	L	L	P	M	S	g600223	
263	G	D	V	S	P	V	S	T	G	L	P	A	A	P	V	L	E	A	G	V	P	Q	Q	S	P	L	D	L	T	SEQ ID NO1	
299	G	D	V	S	P	V	S	T	G	L	P	A	A	P	V	L	E	A	G	V	P	Q	Q	S	P	L	D	L	T	g339762	
291	G	D	L	S	P	S	P	A	G	P	P	T	A	P	S	L	E	E	V	V	L	Q	Q	S	P	L	V	Q	A	g600223	
293	R	E	P	Q	L	E	P	G	E	Q	S	Q	V	A	H	G	T	N	G	I	H	V	T	G	G	S	M	T	I	T	SEQ ID NO1
329	R	E	P	Q	L	E	P	G	E	Q	S	Q	V	A	H	G	T	N	G	I	H	V	T	G	G	S	M	T	I	T	g339762
321	R	E	L	E	A	E	P	G	E	H	G	Q	V	A	H	G	A	N	G	I	H	V	T	G	G	S	V	T	V	T	g600223

FIGURE 2B

323	G	N	I	Y	I	Y	N	G	P	V	L	G	G	P	P	G	P	G	D	L	P	A	T	P	E	P	P	Y	P	I	SEQ ID NO1
359	G	N	I	Y	I	Y	N	G	P	V	L	G	G	P	P	G	P	G	D	L	P	A	T	P	E	P	P	Y	P	I	g339762
351	G	N	I	Y	I	Y	N	G	P	V	L	G	G	T	R	G	P	G	D	P	P	A	P	P	E	P	P	Y	P	T	g600223
353	P	E	E	G	D	P	G	P	P	G	L	S	T	P	H	Q	E	D	G	K	A	W	H	L	A	E	T	E	H	-	SEQ ID NO1
389	P	E	E	G	D	P	G	P	P	G	L	S	T	P	H	Q	E	D	G	K	A	W	H	L	A	E	T	E	H	-	g339762
381	P	E	E	G	A	P	G	P	S	E	L	S	T	P	Y	Q	E	D	G	K	A	W	H	L	A	E	T	E	T	L	g600223
382	-	C	G	A	T	P	S	N	R	G	P	R	N	Q	F	I	T	H	D												SEQ ID NO1
418	-	C	G	A	T	P	S	N	R	G	P	R	N	Q	F	I	T	H	D												g339762
411	G	C	Q	D	L																										g600223

FIGURE 2C

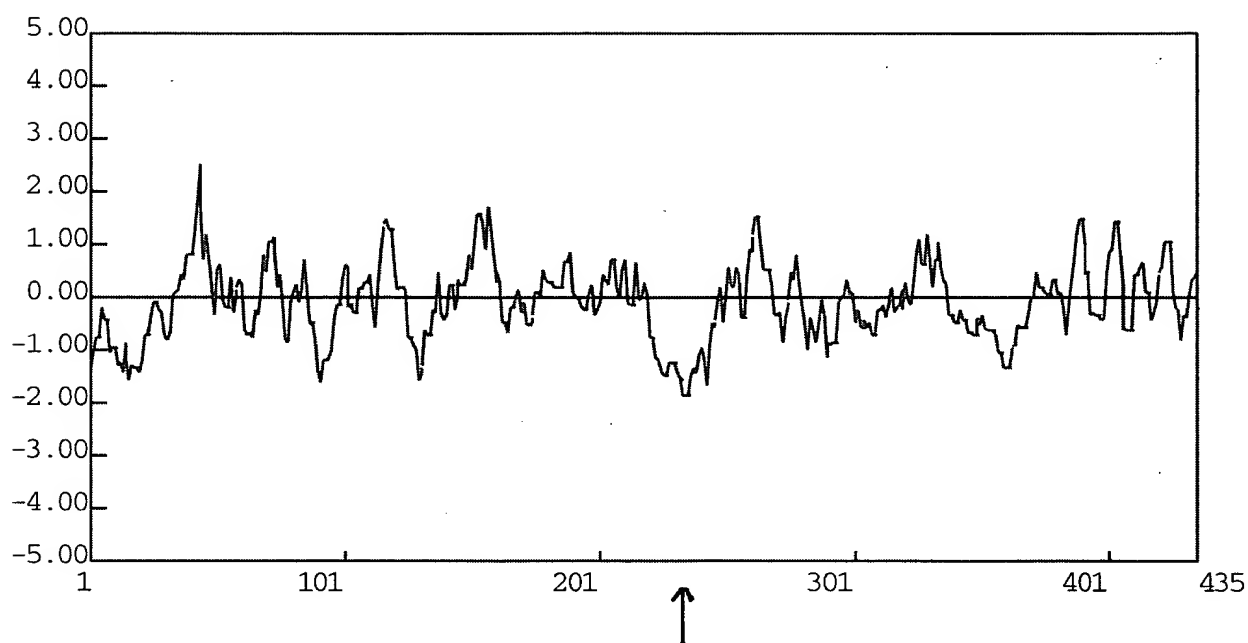


FIGURE 3A

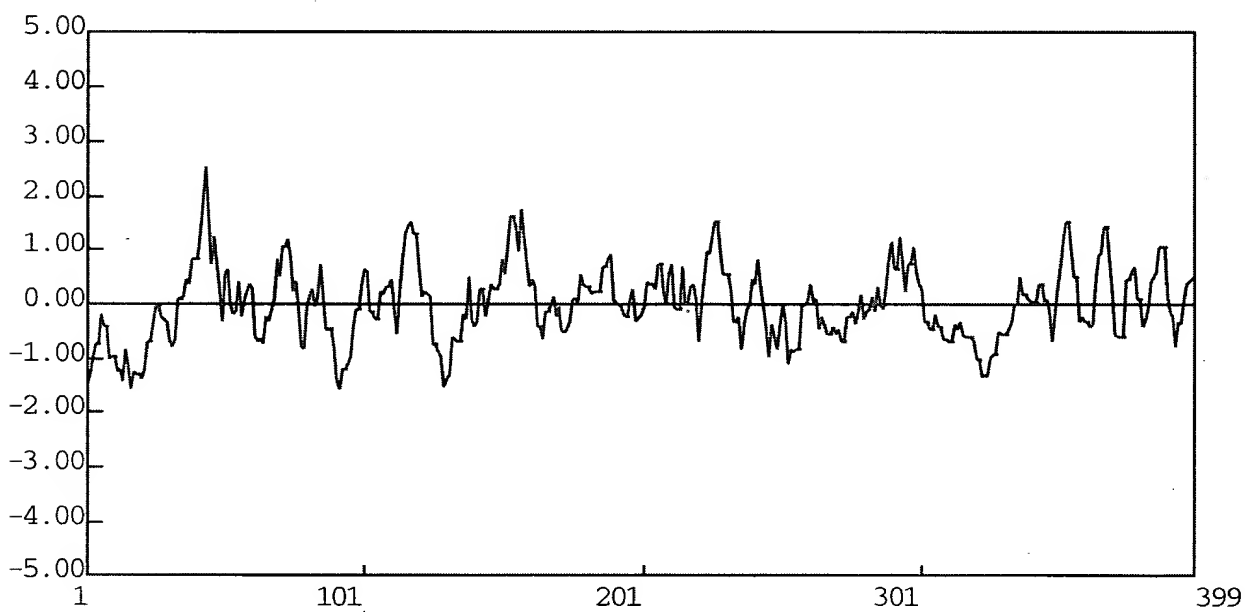


FIGURE 3B